

AMENDMENTS TO THE SPECIFICATION

Please replace the second paragraph on page 4 with the following rewritten paragraphs:

This object is achieved by means of a virtual concatenation of the optical channels, i.e. lambda concatenation, similar to the virtual concatenation of the Virtual containers in the SDH or SONET synchronous transmissions, set forth in ~~the independent claims 1 and 2~~ the method for virtually concatenating optical channels in WDM networks comprising providing for a plurality of frames, each frame comprising a byte reserved for a concatenation flag; writing the same value defined in advance into the n-frame (n=1,2,3,...) concatenation byte; and transmitting the n frames through n respective channels and in the method for receiving a number n of virtually concatenated signal frames in WDM networks, comprising receiving a first reference frame at an instant to; reading the concatenation byte value of such reference frame; receiving the remaining n-1 signal frames after a respective determined time t; reading the concatenation byte value of the remaining n-1 signal frames; and identifying and aligning all the signal frames with the same concatenation byte value compensating for the receiving time t.

Further advantageous characteristics of the invention are set forth in the dependent claims. For example, an apparatus for virtually concatenating optical channels in WDM networks, comprising a first circuit for writing the same predetermined value into the concatenation byte of n-signal frames (n=1,2,3,...) ; and a transmitter of the n frames through n respective channels and an apparatus for receiving a number n of signal frames virtually concatenated in WDM networks, comprising a first receiver of a first reference frame at an instant to; a first circuit for reading the concatenation byte value of such reference frame; a

second receiver of the remaining n-1 signal frames after a respective determined time t; a
second circuit for reading the concatenation byte value of the remaining n-1 frames; and a
circuit for identifying and aligning all the signal frames with the same concatenation byte
value compensating for the receiving times t. ~~Claims 6 and 7 define the~~ The apparatuses are
for implementing the method of the invention.

A WDM network comprising circuits for the implementation of the method for
virtually concatenating optical channels, a WDM network comprising circuits for the
implementation of the method for receiving a number n of virtually concatenated signal
frames, a WDM network comprising an apparatus for virtually concatenating optical channels
and a WDM network comprising an apparatus for receiving a number n of virtually
concatenated signal frames. ~~Claims 8 to 11 define a WDM network incorporating the features~~
~~of claims 1 to 7~~ the present invention. All the claims are intended to be an integral part of the
present description.

**Please replace the second paragraph on page 5 with the following rewritten
paragraph:**

BRIEF DESCRIPTION OF THE DRAWINGS

There now follows a detailed description of the present invention, given by way of a
mere non limiting example, to be read with reference to the various figures, wherein:

- Fig. 1 shows an ODUK frame with related header and related payload;
- Fig. 2 shows n concatenated channels $\lambda_1, \lambda_2, \dots, \lambda_n$; and
- Fig. 3 shows a flow chart in which the main steps of the concatenation method
according to the invention have been indicated.

- Fig. 4 shows a first circuit transmitter and a first receiver, first circuit, second receiver, second circuit and circuit for identifying and aligning in an exemplary embodiment of the present invention.

Please replace the third paragraph on page 6 with the following rewritten paragraph:

In other words, in the position of the VCB byte of the $ODU_{k\lambda_1}$ frame to be transmitted over the first channel (λ_1), a certain value $VCB\#z$ is written; at the same time, in the position of the VCB byte of the $ODU_{k\lambda_1}$ frame to be transmitted over the second channel (λ_1) the same value ~~$VCBz$~~ $VCB\#z$ is written, and so on till the VCB of the $OTU_{k\lambda_n}$ frame. The frames are then transmitted in a concatenated and perfectly aligned way.

Please replace the first paragraph on page 9 with the following rewritten paragraph:

The various steps of the method of the invention can be summarized as follows, with reference to Fig. 3.

In transmission:

- writing the same pre-established value into the virtual concatenation byte (VCB) of n-frame ($n=1,2,3,\dots$) ; and
- transmitting the n frames through n respective channels ($\lambda_1, \lambda_2, \dots \lambda_n$) (Fig. 4).

In reception:

- receiving a first reference frame at an instant t_0 ;
- reading the virtual concatenation byte (VCB) of the reference frame;

- receiving $n-1$ frames at corresponding instants t_1 ;
- calculating, for each of the $n-1$ frames, $t = t_1 - t_0$;
- for each of the $n-1$ frames, reading the corresponding VCB and calculating

$$\Delta_{VCB} = VCB_{rif} - VCB;$$

- for each of $n-1$ frames, calculating $\Delta = t + T(VCB_{rif} - VCB)$; and
- aligning the frames depending on the corresponding value Δ obtained (Fig. 4).

Please delete the present Abstract of the Disclosure and replace it with the following rewritten Abstract of the Disclosure.

A virtual concatenation method for optical channels in WDM networks ~~is described~~. In transmission, the method ~~comprises the steps of~~ includes providing for a plurality of frames, each frame ~~comprising~~ including a byte reserved for a concatenation flag; writing the same predefined value in the concatenation byte of n frames ($n = 1, 2, 3, \dots$); and transmitting the n frames via n respective channels ($\lambda_1, \lambda_2, \dots, \lambda_n$). In reception, it ~~comprises the steps of~~ includes receiving the first reference frame at one instant; reading the concatenation byte value of ~~said the~~ reference frame; receiving the remaining signal frames after a respective determined time; reading the value of the concatenation byte of the remaining signal frames; and identifying and aligning all the signal frames with the same concatenation byte value compensating the reception times. ~~(fig. 3).~~